

First Named Inventor	Leonard Forbes	<b>INFORMATION DISCLOSURE STATEMENT FORM PTO-1449</b>
Serial No.	10/682,590	
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Title: FULLY DEPLETED SILICON-ON-INSULATOR CMOS LOGIC		Sheet 1 of 7

U.S. Patent References				
Examiner Initials	Document No.	Issue/Publication Date	Name	Filing Date
UAC	2001/0001075 A1	05/10/2001	Ngo	12/20/2000
	2001/0004332 A1	06/21/2001	Eitan	02/07/2001
	2001/0011755 A1	08/09/2001	Tasaka	09/16/1998
	2002/0142569 A1	10/03/2002	Chang	03/29/2001
	2002/0146885 A1	10/10/2002	Chen	04/03/2002
	2002/0151138 A1	10/17/2002	Liu	04/10/2002
	2002/0177275 A1	11/28/2002	Liu	05/28/2002
	2002/0182829 A1	12/05/2002	Chen	05/31/2001
	2003/0057997 A1	03/27/2003	Sun	10/18/2002
	2003/0067807 A1	04/10/2003	Lin	10/22/2001
	2003/0117861 A1	06/26/2003	Maayan	12/20/2001
	4,184,207	01/15/1980	McElroy	07/12/1978
	4,420,504	12/13/1983	Cooper	05/17/1982
	4,755,864	07/05/1998	Ariizumi	09/14/1987
	4,881,114	11/14/1989	Mohsen	05/16/1986
	5,241,496	08/31/1993	Lowrey	08/19/1991
	5,330,930	07/19/1994	Chi	12/31/1992
	5,378,647	01/03/1995	Hong	10/25/1993
	5,379,253	01/03/1995	Bergemont	06/01/1992
	5,397,725	03/14/1995	Wolstenholme	10/28/1993
	5,467,305	11/14/1995	Bertin	03/12/1992
	5,576,236	11/19/1996	Chang	06/28/1995
	5,768,192	06/16/1998	Eitan	07/23/1996
	5,792,697	08/11/1998	Wen	04/23/1997
	5,858,841	01/12/1999	Hsu	11/25/1997
	5,911,106	06/08/1999	Tasaka	08/29/1997
	5,946,558	08/31/1999	Hsu	05/30/1997
	5,966,603	10/12/1999	Eitan	06/11/1997
	5,994,745	11/30/1999	Hong	04/24/1995
	6,011,725	01/04/2000	Eitan	02/04/1999
	6,028,342	02/22/2000	Chang	02/11/1998
	6,030,871	02/29/2000	Eitan	05/05/1998
	6,044,022	03/28/2000	Nachumovsky	02/26/1999
	6,081,456	06/27/2000	Dadashev	02/04/1999
	6,108,240	08/22/2000	Lavi	02/04/1999
	6,133,102	10/17/2000	Wu	06/19/1998
	6,134,156	10/17/2000	Eitan	02/02/1999
	6,147,904	11/14/2000	Liron	02/04/1999
✓	6,157,570	12/05/2000	Nachumovsky	02/04/1999

Examiner Signature	<i>[Signature]</i>	Date Considered	08/14/04
<small>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>			

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Title: FULLY DEPLETED SILICON-ON-INSULATOR CMOS LOGIC		Sheet 2 of 7

6,172,396 B1	01/09/2001	Chang	04/23/1998
6,174,758 B1	01/16/2001	Nachumovsky	03/03/1999
6,175,523 B1	01/16/2001	Yang	10/25/1999
6,181,597 B1	01/30/2001	Nachumovsky	02/04/1999
6,184,089 B1	02/06/2001	Chang	01/27/1999
6,201,282 B1	03/13/2001	Eitan	12/23/1999
6,201,737 B1	03/13/2001	Hollmer	04/26/2000
6,204,529 B1	03/20/2001	Lung	08/27/1999
6,207,504 B1	03/27/2001	Hsieh	12/30/1998
6,208,557 B1	03/27/2001	Bergemont	05/21/1999
6,215,702 B1	04/10/2001	Derhacobian	02/16/2000
6,218,695 B1	04/17/2001	Nachumovsky	06/28/1999
6,222,768 B1	04/24/2001	Hollmer	04/26/2000
6,240,020 B1	05/29/2001	Yang	10/25/1999
6,243,300 B1	06/05/2001	Sunkavalli	02/16/2000
6,251,731 B1	06/26/2001	Wu	07/13/1999
6,255,166 B1	07/03/2001	Ogura	12/28/1999
6,256,231 B1	07/03/2001	Lavi	02/04/1999
6,266,281 B1	07/24/2001	Derhacobian	02/16/2000
6,269,023 B1	07/31/2001	Derhacobian	10/23/2000
6,272,043 B1	08/07/2001	Hollmer	06/23/2000
6,275,414 B1	08/14/2001	Randolph	11/22/2000
6,282,118 B1	08/28/2001	Lung	10/06/2000
6,291,854 B1	09/18/2001	Peng	12/30/1999
6,297,096 B1	10/02/2001	Boaz	07/30/1999
6,303,436 B1	10/16/2001	Sung	09/21/1999
6,327,174 B1	12/04/2001	Jung	02/24/2000
6,348,711 B1	02/19/2002	Eitan	10/06/1999
6,392,930 B2	05/21/2002	Jung	01/09/2001
6,406,951 B1	06/18/2002	Yu	02/12/2001
6,417,053 B1	07/09/2002	Kuo	11/20/2001
6,421,275 B1	07/16/2002	Chen	01/22/2002
6,429,063 B1	08/06/2002	Eitan	03/06/2000
6,432,778 B1	08/13/2002	Lai	08/07/2001
6,461,949 B1	10/08/2002	Chang	03/29/2001
6,468,864 B1	10/22/2002	Sung	08/10/2001
6,469,342 B1	10/22/2002	Kuo	11/20/2001
6,477,084 B2	11/05/2002	Eitan	02/07/2001
6,486,028 B1	11/26/2002	Chang	11/20/2001
6,487,050 B1	11/26/2002	Liu	12/28/1999
6,498,377 B1	12/24/2002	Lin	03/21/2002
6,514,831 B1	02/04/2003	Liu	11/14/2001

Examiner Signature	<i>Nachumovsky</i>	Date Considered	08/14/04
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6,531,887 B2	03/11/2003	Sun	06/01/2001
6,537,891 B1	03/25/2003	Dennison	08/29/2000
6,545,309 B1	04/08/2003	Kuo	03/22/2002
6,552,287 B1	04/22/2003	Eitan	12/14/1998
6,559,013 B1	05/06/2003	Pan	07/10/2002
6,576,511 B2	06/10/2003	Pan	05/02/2001
6,580,135 B2	06/17/2003	Chen	03/22/2002
6,580,630 B1	06/17/2003	Liu	06/07/2002
6,602,805 B2	08/05/2003	Chang	12/14/2000
6,605,843 B1	08/12/2003	Krivokapic	08/11/2000
6,607,957 B1	08/19/2003	Fan	07/31/2002
6,610,586 B1	08/26/2003	Liu	09/04/2002
6,613,632 B2	09/02/2003	Liu	05/28/2002
6,617,204 B2	09/09/2003	Sung	08/13/2001
6,627,505 B2	09/30/2003	Adan	02/04/2002
6,660,598 B2	12/09/2003	Hanafi	02/26/2002

Foreign Patent References				
Examiner Initials	Country	No.	Name	Publication Date
lt	EP	84303740.9	American Microsystems, Inc.	01/25/1985
↓	EP	90115805.5	Kabushiki Kaisha Toshiba	02/20/1991
	EP	01113179.4	Infineon Technologies AG	12/04/2002

Other References	
Examiner Initials	Author, Title, Date, Pages, etc.
lt	B. Eitan et al., "Characterization of Channel Hot Electron Injection by the Subthreshold Slope of NROM™ Device," IEEE Electron Device Lett., Vol. 22, No. 11, (Nov. 2001) pp. 556-558, Copyright 2001 IEEE.
I	B. Eitan et al., "Spatial Characterization of Hot Carriers Injected into the Gate Dielectric Stack of a MOFSET Based on Non-Volatile Memory Device," date unknown, pp. 58-60.
I	B. Eitan et al., "NROM: A Novel Localized Trapping, 2-Bit Nonvolatile Memory Cell," IEEE Electron Device Lett, Vol. 21, No. 11, (Nov. 2000), pp. 543-545, Copyright 2000 IEEE.
✓	E. Maayan et al., "A 512Mb NROM Flash Data Storage Memory with 8MB/s Data Range," Dig. IEEE Int. Solid-State Circuits Conf., San Francisco, (Feb 2002), pp. 1-8, Copyright Saifun Semiconductors Ltd. 2002.

Examiner Signature	<i>[Signature]</i>	Date Considered	08/14/04
<small>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>			


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Attorney Docket No.	400.257US01	
Title: FULLY DEPLETED SILICON-ON-INSULATOR CMOS LOGIC		Sheet 4 of 7

44	E. Maayan et al., "A 512Mb NROM Flash Data Storage Memory with 8MB/s Data Range," ISSCC 2002 Visuals Supplement, Session 6, SRAM and Non-Volatile Memories, 6.1 and 6.2, pp. 76-77, 407-408. Copyright 1990 IEEE.
	M. Janai, "Data Retention, Endurance and Acceleration Factors of NROM Devices," IEEE 41 <sup>st</sup> Annual International Reliability Physics Symposium, Dallas, TX (2003), pp. 502-505, Copyright 1989 IEEE.
	S. Minami and Y. Kamigaki, "A Novel MONOS Nonvolatile Memory Device Ensuring 10-Year Data Retention after 10 <sup>7</sup> Erase/Write Cycles," IEEE Transactions on Electron Devices, Vol. 40, No. 11 (Nov. 1993) pp. 2011-2017, Copyright 1998 IEEE.
	C. Pan, K. Wu, P. Freiburger, A. Chatterjee, G. Sery, "A Scaling Methodology for Oxide-Nitride-Oxide Interpoly Dielectric for EPROM Applications," IEEE Transactions on Electron Devices, Vol. 37, No. 6, (June 1990), pp. 1439-1443, Copyright 1990 IEEE.
	P. Manos and C. Hart, "A Self-Aligned EPROM Structure with Superior Data Retention," IEEE Electron Device Letters, Vol. 11, No. 7, (July 1990) pp. 309-311, Copyright 1990 IEEE
	W. Owen and W. Tchon, "E <sup>2</sup> PROM Product Issues and Technology Trends," IEEE 1989, pp. 17-19, Copyright 1989 IEEE.
	T. Huang, F. Jong, T. Chao, H. Lin, L. Leu, K. Young, C. Lin, K. Chiu, "Improving Radiation Hardness of EEPROM/Flash Cell BY N <sub>2</sub> O Annealing," IEEE Electron Device Letters, Vol. 19, No. 7 (July 1998), pp. 256-258, Copyright 1998 IEEE.
	B. Eitan et al., "Electrons Retention Model for Localized Charge in Oxide -Nitride-Oxide (ONO) Dielectric," IEEE Device Lett., Vol. 23, No. 9, (Sept. 2002), pp.556-558. Copyright 2002 IEEE.
	T. Nozaki, T. Tanaka, Y. Kijiya, E. Kinoshita, T. Tsuchiya, Y. Hayashi, "A 1-Mb EEPROM with MONOS Memory Cell for Semiconductor Disk Application," IEEE Journal of Solid-State Circuits, Vol. 26, No. 4 (April 1991), pp. 497-501, Copyright 1991 IEEE.
	F. Vollebregt, R. Cuppens, F. Druyts, G. Lemmen, F. Verberne, J. Solo, "A New E(E)PROM Technology With A TiSi <sub>2</sub> Control Gate," IEEE 1989, pp. 25.8.1 - 25.8.4, Copyright 1989 IEEE.
	B. Eitan et al., "Impact of Programming Charge Distribution on Threshold Voltage and Subthreshold Slope of NROM Memory cells," IEEE Transactions on Electron Devices, Vol. 49, No. 11, (Nov. 2002), pp. 1939-1946, Copyright 2002 IEEE.
	B. Eitan et al., "Spatial characterization of Channel hot electron injection utilizing subthreshold slope of the localized charge storage NROM™ memory device," Non-Volatile Semiconductor Memory Workshop (NVSMW), Monterey, CA, (Aug. 2001), pp. 1-2.
	B. Eitan et al., "Can NROM, a 2-bit, Trapping Storage NVM Cell, Give a Real Challenge to Floating Gate Cells?" Int. Conf. on Solid State Devices and Materials, Tokyo, (1999), pp. 1-3, Copyright 1999 Saifun Semiconductors Ltd.
✓	S. Ogura, et al. "Twin MONOS Cell with Dual Control Gates," Halo LSI and New Halo, pp 187-187.3, Date Unknown.

Examiner Signature	<i>[Signature]</i>	Date Considered	08/14/04
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

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Attorney Docket No.	400.257US01	
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uk	T. Sugizaki, et al. "New 2-bit/Tr MONOS Type Flash Memory using Al <sub>2</sub> O <sub>3</sub> as Charge Trapping Layer," Fujitsu Laboratories Ltd, Date Unknown.
	T. Saito, et al. "Hot Hole Erase Characteristics and Reliability in Twin MONOS Device" Halo LSI, Date Unknown.
	Saifun Semiconductors, LTD. PowerPoint Presentation, Date Unknown
	Y. Roizin, et al. "Novel Techniques for data retention and Leff measurements in two bit MicroFlash® Memory Cells," Characterization and Metrology for ULSI Technology: 200 International Conf., pp. 181-185, Copyright 2001 American Institute of Physics, 1-56396-967-X/01.
	W. J. Tsai, et al. "Cause of Data Retention Loss in a Nitride-Based Localized Trapping Storage Flash Memory Cell," IEEE 40 <sup>th</sup> Annual International Reliability Physics Symposium, Dallas, (2002), pp. 34-38. Copyright 2002 IEEE.
	W.J. Tsai, et al. "Data Retention Behavior of a SONOS Type Two-Bit Storage Flash Memory Cell," IEDM 01-0179-01-722, Copyright 2001 IEEE.
	A. Shappir, et al., "Subthreshold slope degradation model for localized-charge-trapping based non-volatile memory devices," Solid-State Electronics 47 (2003), pp. 937-941. Copyright 2003 Elsevier Science Ltd.
	R. Neale, "AMD's MirrorBit – a big step in Flash progress," Electronic Engineering Design, V. 74, No. 906, pp. 47-50.
	I. Bloom, et al., "NRROM™ -a new technology for non-volatile memory products" Solid-State Electronics 46 (2002), pp. 1757-1763. Copyright 2002 Elsevier Science Ltd.
	J. Bu and M. White, "Electrical characterization on ONO triple dielectric in SONOS nonvolatile memory devices," Solid-State Electronics 45 (2001) pp. 47-51. Copyright 2001 Elsevier Science Ltd.
	Y. Kamigaki and S. Minami, "MNOS Nonvolatile Semiconductor Memory Technology: Present and Future," IEICE Trans. Electron, Vol. E84-C, No. 6, pp. 713-723 (June 2001)
	E. Lusky, et al., "Electron Discharge Model of Locally-Trapped Charge in Oxide-Nitride-Oxide (ONO) Gates for NRROM™ Non-Volatile Semiconductor Memory Devices," Extended Abstracts of the 2001 International Conference on Solid State Devices and Materials, Tokyo, 2001 pp. 534-535.
	A. Nughin, "n-Channel 256kb and 1Mb EEPROMs," ISSCC91, Session 134, Special Session on Technology in the USSR, Paper 13.4, 1991 IEEE International Solid State Circuits Conference, Digest of Technical Papers, pp. 228-229, 319
	G. Xue, et al., "Low Voltage Low Cost Nitride Embedded Flash Memory Cell" IMEC., Date Unknown.
	L. Breuil, et al., "A new 2 isolated-bits/cell flash memory device with self aligned split gate structure using ONO stacks for charge storage," IMEC, Date Unknown.
✓	J. Willer, et al., "UMEM: A U-shape Non-Volatile-Memory Cell," Ingentix GmbH & Co. KG., Infineon Technologies and Saifun Semiconductors, Date Unknown

Examiner Signature		Date Considered	08/14/04
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Attorney Docket No.	400.257US01	
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44	S. Kang, et al., "A Study of SONOS Nonvolatile Memory Cell Controlled Structurally by Localizing Charge-Trapping Layer," Samsung Electronics Co., Ltd., Date Unknown.
	Y. Roizin, et al., "In-Process Charging in <i>microFLASH</i> ® Memory Cells," Tower Semiconductor, Ltd., Date Unknown
	A. Shappir, et al., "Subthreshold slope degradation model for localized-charge-trapping based non-volatile memory devices," Solid State Electronics, 47 (2003) pp. 937-941, Copyright 2003 Elsevier Science Ltd.
	I. Fujiwara, et al., "High speed program/erase sub 100 nm MONOS memory cell," Sony Corporation, Date Unknown
	E. Lusky, et al., "Investigation of Spatial Distribution of CHE Injection Utilizing the Subthreshold Slope and the Gate Induced Drain Leakage (GIDL) Characteristics of the NROM™ Device," Saifun Semiconductors, Ltd. and Tel Aviv University, Dept of Physical Electronics, pp. 1-2., Date Unknown
	C. C. Yeh, et al., "A Modified Read Scheme to Improve Read Disturb and Second Bit Effect in a Scaled MXVAND Flash Memory Cell," Macronix International Co., Ltd. and Department of Electronics Engineering, National Chiao-Tung University, Date Unknown.
	Y. K. Lee, et al., "30-nm Twin Silicon-Oxide-Nitride-Oxide-Silicon (SONOS) Memory (TSM) with High Erase Speed and Reliability," School of Electrical Engineering, Seoul National University, C&M, System LSI, ATD, PD, Samsung Electronics Co., Date Unknown
	J. H. Kim, et al., "Highly Manufacturable SONOS Non-Volatile Memory for the Embedded SoC Solution," 2003 Symposium on VLSI Technology Digest of Technical Papers, pp. 31-32.
	Y. Hayashi, et al., "Twin MONOS Cell with Dual Control Gates," 2000 Symposium on VLSI Technology Digest of Technical Papers, 2000 IEEE, pp. 122-123.
	M. K. Cho and D. M. Kim, "High Performance SONOS Memory Cells Free of Drain Turn-On and Over-Erase: Compatibility Issue with Current Flash Technology," IEEE Electron Device Letters, Vol. 21, No. 8, August 2000, pp. 399-401, Copyright 2000 IEEE
	T. Y. Chan, K.K. Young and C. Hu, "A True Single-Transistor Oxide-Nitride-Oxide EEPROM Device," IEEE Electron Device Letters, Vol. EDL-8, No. 3, March 1987, pp. 93-95., Copyright 1987 IEEE.
	I. Bloom, et al., "NROM™ NVM technology for Multi-Media Applications," Saifun Semiconductors, Ltd. Ingentix, Ltd. and Infineon Technologies, Date Unknown
	E. J. Prinz, et al., "An Embedded 90nm SONOS Flash EEPROM Utilizing Hot Electron Injection Programming and 2-Sided Hot Hole Injection Erase," Motorola Embedded Memory Center, Date Unknown
	Y. Roizin, et al., "Retention Characteristics of <i>microFLASH</i> ® Memory (Activation Energy of Traps in the ONO Stack)," Tower Semiconductor, Ltd., Date Unknown
	Y. Roizin, et al., "Activation Energy of Traps in the ONO Stack of <i>microFLASH</i> ® Memory Cells," Tower Semiconductor, Ltd., Date Unknown
✓	Y. Roizin, et al., "'Dummy' Gox for Optimization of <i>microFLASH</i> ® Technology," Tower Semiconductor, Ltd., Date Unknown

Examiner Signature	<i>Michael Brown</i>	Date Considered	08/14/04
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<i>llh</i>	Y. K. Lee, et al., "Multi-Level Vertical Channel SONOS Nonvolatile Memory on SOI," 2002 Symposium on VLSI Technology Digest of Technical Papers, Copyright 2002 IEEE.
	T. Saito, et al., "CHE Program Behavior in MONOS Device," Halo LSI., Date Unknown
	J. Bu, et al., "Retention Reliability Enhanced SONOS NVSM with Scaled Programming Voltage," Microelectronics Lab., Date Unknown
	H. Tomiye, et al., "A novel 2-bit/cell MONOS memory device with a wrapped-control-gate structure that applies source-side hot-electron injection," 2002 Symposium on VLSI Technology Digest of Technical Papers, Copyright 2002 IEEE.
<i>✓</i>	Certified Translation, "Flash cell that seeks to replace current technology introduced enabling both low cost and high performance" Nikkei Microdevices, November 1999, pp. 147-148.

Examiner Signature	<i>Michael</i>	Date Considered	<i>08/14/04</i>
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